



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,643	11/22/2000	John A. Sollars JR.	2105B	2629

7590

05/21/2003

Milliken & Company
P. O. Box 1927
Spartanburg, SC 29304

EXAMINER

SINGH, ARTI R

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,643

Applicant(s)

SOLLARS ET AL.

Examiner

Ms. Arti Singh

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed on 02/20/2003. Applicant's amendments to the specification and claims have been entered. Applicant's amendment to update the continuity data in the first paragraph and throughout the specification overcomes the objections made in paragraphs 2 and 4 of the previous office action. Applicant's amendment to the specification to correct the minor informalities, and correction to the trademark/tradenames, also overcomes the objections made in paragraph 3 of the previous office action. The objections made in paragraphs 5 and 6 have also been overcome by the amendment. Submission of the Terminal Disclaimer overcomes the rejections made in paragraphs 9 and 10 of the previous office action. Despite these advances, the amendments are not found to patently distinguish the claims over the prior art do not however overcome the rejections made in paragraphs 7 and 8, that is the double patenting rejections made in the previous office action and Applicant's arguments are not found persuasive of patentability for reasons set forth herein below, and are thus maintained.

Response to Arguments

2. Applicant's arguments filed 02/20/2003 have been fully considered but they are not persuasive. In response to the Double patenting rejections Applicants argues that the cited Application 09/718,812 and USPN 6,451,715 both do not employ a performed film and instead use a coating of the same chemical composition. To this the Examiner takes the position using a film instead of a coating is a methodical step that does not materially effect the final product, and that a skilled artisan would not be able to tell the difference as to whether a film coating was used or a resin coating was used because both inventions require that prior

Art Unit: 1771

to the formation of the final product both applications require that simultaneous exposure of heat and pressure allow the coating or film which is atop the base fabric layer to become somewhat plastic and thus "cement" between (interstices) and to the individual yarns of the fabric and hold them in place so that the final product is impermeable. See Applicant's disclosure (pages 7, line 11, page 10, lines 14, page 11, line 2 and page 11 line 11).

Additionally, Applicant's claims do not recite or are not commensurate in scope as the claims simply recites a film is laminated, not a preformed film.

Therefore, in lieu of the Examiner's rebuttal Applicant's arguments are found to be unconvincing and the double patenting rejections are maintained and restated for Applicant's convenience. The DP rejection made in paragraph 9 of the previous office action matured into USPN 6,451,715 and had been modified so that the rejection is proper.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-15, 18-30, 33-45, 48-60 and 63-69 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-43 of copending Application No. 09/718,812. Although the conflicting claims are not identical, they are not patentably distinct from each other either, because the claims of the present Application, 09/718,643, are drawn to an airbag cushion comprising a coated inflatable fabric which may be at least partially coated, while the claims of the Application 09/718,812 are drawn to an airbag cushion comprising a coated fabric, wherein said fabric is coated with a laminate film, implying a fully coated surface. Both Applications require the same structure and chemistry for the airbag fabric and its coating. However, the present Application 09/718,643 refers to the coating as an elastomeric composition, and the Application 09/718,812 refers to the same coating as a film. The phrase "coated with a laminate film" implies that the film was obtained via a coating process and thus, is actually a method step and would have no effect on the end result of the final airbag cushion that is produced, and thus, no patentable distinction is seen.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1-69 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-11, 17-23 and 29-35 of copending USPN 6,451,715. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the claims of USPN 6,451,715 and the present Application are drawn to a coated fabric with specific leak down times wherein the

Art Unit: 1771

coated fabric has at least one single narrow fabric layer at a discrete area and at least two layers of fabric in certain discrete areas. While the claims of Application USPN 6,451,715 add the further limitations of the packing volume, this limitation would be proportional to the amount of coating on the fabric i.e. the lower the amount of packing volume, the less of a coating is employed. Thus, the coated fabric recited in the Application, with the amount of coating being 3.0 ounces per square yard or less, would meet the packing volume limitations seeing as the fabric layers have the same weave construction and the same coating composition is used. Further, with regard to the use of an organic solvent in the elastomeric coating composition by the present Application, the Examiner takes the position that once the final product was produced there would be no evidence of it, and hence it is read upon as a method limitation. Therefore, the claims of both the Applications appear to be obvious variants of one another, and thus no patentable distinction is seen.

Claim Objections

6. Claims 1-69 are objected to because of the following informalities: at present it appears that in the independent claims that the fabric layers would read on two fabric layers that are ultrasonically bonded. Please clear up the language so that the claims distinctly show that two fabric layers for the single narrow layer solely by the weave.

Claim Rejections - 35 USC § 103(new)

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1771

8. Claims 1-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe (USPN 4,668,545) further in view of Moriwaki et al (USPN 5,989,660). Lowe teaches a heat-activated article comprising a fabric having an angled or branched hollow region woven therein (column 1, lines 60-65). The article is preferably heat-activatable by virtue of the fabric being woven from heat-recoverable fibres, which may be polyamides (column 2, line 38) heat-curable fibres or heat-activatable adhesive (heat-softenable or hot-melt) fibres. Two or more of these may be combined. Alternatively, or additionally, heat-activation may result from insertion or addition of another material after weaving. The result of this is to produce two layers or plies of woven fabric, one above the other. Since a hollow article rather than two unconnected lengths of fabric is required, the weft fibres (a) and the weft fibres (b) may both interlace a certain number of warp fibres at either edge of the above-mentioned zone. Alternatively, or additionally, a knitted stitch may be provided joining together the longitudinal edges of the fabric, as will result for example from use of a needle insertion narrow fabric loom. A further technique, applicable to the use of a shuttle loom, is to use a continuous weft by circular weaving. The number of warp fibres that constitute the first and second groups is made to vary across the warp direction as weaving proceeds such that the hollow becomes angular or branched, if required. The result of such a variation may be to make an angle or branch in the plane of the fabric. Alternatively, or additionally, the number of groups of fibres constituting the zone may be made to change, for example from two to three (or three to two) as weaving progresses thereby causing the number of layers of fabric to increase from two to three. The result of this is the production of a generally blind, hollow branch-off in the thickness of the fabric. The number of layers of fabric may be four (or more) thereby producing two hollow regions in the thickness of the fabric which are separable. Four layers will require two edge joins and this may be done using, for example, a

Art Unit: 1771

narrow fabric needle loom having two weft insertion needles and associated knitting needles at the edges (column 4, lines 8-65). Any suitable weave may be employed, for example plain, matt (or basket), twill, broken twill, satin, sateen, leno, hop sack, sack and various weave combinations, in single or multiple ply weaves. The weave design may be uniform over the whole fabric or different weave designs may be employed at different parts, for example over the zone and at the borders. An advantage of any of these weaves is that by employing different fibres as the warp and weft, or by employing zones of different fibres as each of the warp and weft, a hollow article with anisotropic or localized properties may be produced. The weave density and fibre thickness will depend on the intended use of the hollow article (column 5, lines 11-33). Thus, Lowe teaches coated inflatable fabrics which are woven to form hollow or narrow areas of varying weaves.

Moriwaki et al. discloses a fabric for use in an airbag comprising a fibrous substrate having adhered to it a covering layer made of a thermoplastic synthetic resin (abstract). The fibrous substrate or fabric used by patentee can be a woven, knitted or nonwoven fabric formed from polyamide fibers of nylon 6,6, nylon 6, nylon 12, etc (column 2, lines 33-36). The fibers that make up the fabric have a denier of 200-500 (column 3, lines 8-10) and a cover factor of 1700 to 2500 denier (column 2, line 10). The thickness of each monofilaments are at least 0.1 denier to 7 deniers (column 3, lines 4-6). The synthetic thermoplastic resin that forms said covering layer is found to be equivalent to Applicant's elastomeric coating layer, and may be polyurethane, polyester, polyamide, acrylic polymer, polyethylene or polypropylene, of which polyurethane and polyester are the most preferred (column 3, lines 20-25). The average thickness of the synthetic thermoplastic film formed on the surface of the woven substrate is 10 μ or less, which when converted equals 0.393 mils. The thermoplastic synthetic resin may be applied as a solution or dispersion thereof in

Art Unit: 1771

a liquid medium, preferably an aqueous medium. The resin solution or dispersion may exist initially in concentrated form, in which case it can be diluted at will to the desired resin solids concentration suitable for application. To apply the thermoplastic synthetic resin, immersion is usually adopted. In this case, for example, a dipping tank and a mangle or vacuum apparatus to ensure homogeneous impregnation may be used in combination. However, for example, a sprayer or foaming machine can also be used, and the resin application method is not especially limited. When a sprayer or foaming machine is used, the fabric can be coated with the resin on one side only or on both sides. Thus, Moriwaki et al. teach the general structure of a coated airbag fabric having a denier of 200-500, with a filament denier of 4 or less.

A person having ordinary skill in the art at the time the invention was made would have found it obvious to have employed the specially woven fabric of Lowe in lieu of the fabric of Moriwaki et al. motivated by the reasoned expectation of formulated a pillowed airbag.

With regard to the limitation of the inflatable fabric comprising at least two layers of fabric in certain discrete areas wherein at least one narrow single fabric layer is formed solely from a basket weave pattern of an even number of yarns at most 12 yarns in width , it is the Examiner's position that optimizing the number of yarns per inch is a result effective variable. The greater the amount of yarns per inch directly affects the strength of the woven cloth. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have at most 12 yarns formed solely from a basket weave, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Art Unit: 1771

In the present invention, one would have optimized the yarns per inch, motivated by the desire to obtain a cloth that has high durability and strength.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti R. Singh whose telephone number is 703-305-0291. The examiner can normally be reached on M-F 7:00am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-873-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



ars
May 19, 2003

Ms. Arti R. Singh
Patent Examiner
Art Unit 1771